glycogene, and fatty matters forbids our assimilating them to simple amœboid masses. It would seem that we may rather compare them to buds, which would thus originate in the interior of the embryo: their development even marks the term of its existence; for we soon see it become disaggregated to set free these bodies, which move, animated by rapid contractions, in the circumambient fluid.

It will be seen that such results compel us to modify profoundly the signification which helminthologists assign to the ciliated embryo of *Bilharzia* in the cycle of development of that species. Its formation in the ovule as a consequence of a sexual act can alone explain the name of proscolex generally given to it; in reality its constitution evidences a superiority the reflection of which we should seek in vain among the different types of the class considered at this period. Far from being deficient, the internal parts are here represented by the cæca, in which we may see the first sketch of a digestive apparatus, and by that vascular ramification which drains the economy after the fashion of an excretory apparatus. By their mode of origin, as by their characters, the contractile corpuscles finally introduce an idea which is new and of high importance, since it enables us to bring together in the same stage the different evolutive states of the Trematode—a conclusion of which it is easy to foresee the importance in general morphology.—*Comptes Rendus*, September 27, 1880, p. 554.

Note on Argiope capsula.
By J. Gwyn Jeffreys, LL.D., F.R.S.

This tiny but remarkable Brachiopod has been lately found by my esteemed correspondent, Mr. Duprey, in Jersey, living at low water. It adheres by its comparatively short but stout byssus, in an upright position, to the underside of large stones which are sunk and partly buried in the sandy mud. Its companions are *Chiton scabridus*, *Rissoa striatula*, *Adeorbis subcarinatus*, and an apparently undescribed species of *Ascidia*. The fall of spring-tides in Jersey is equal to a depth of from 33 to 41 feet.

The specimens kindly sent me by Mr. Duprey are larger than any I had previously seen; and I was enabled to examine the inside of the shell by soaking them for some days in dilute potash water, together with specimens of *Argiope cistellula* of the same size. *A. capsula* has a thick hinge; and the smaller (though scarcely smaller) valve has a sharp-edged and wavy crest or ridge lying a little within the margin, which is heart-shaped and continuous in front. The shell is strong for its size, and is nearly spherical and equivalve, the beaks of both valves being excavated to contain the byssus. There is no trace of a septum in either valve. The cæcal tubercles are numerous, twice as many as in *A. cistellula* of the same size. The latter species is transversely oblong;

there is a distinct and prominent septum in each valve; and the laminar ridge in the smaller valve is much slighter, and is interrupted by the septum to which it is attached. Both species occur together on the English and Irish coasts, and at Etretat in Normandy; and *A. capsula* was recorded by the late Prof. Sars as fossil at Kirköen, near Christiania.

Notes on the Early Stages of some Polychætous Annelides. By E. B. Wilson.

In view of the morphological interest of the marine annelides as the most highly specialized forms among the "Vermes," and the scarcity of detailed accounts of their early stages of development, the following preliminary abstract of studies on the eggs of *Arenicola* and *Clymenella* seems of some interest. The eggs are small and very numerous, and are imbedded in transparent gelatinous masses issuing from the mouths of the tubes or burrows inhabited by the worms. The egg-masses of *Arenicola* are of great size, being sometimes 5 or 6 feet in length and from 2 to 4 inches in diameter; such a mass must contain several hundred thousand eggs. Those of *Clymenella* are usually about the size and shape of a pigeon's egg; the eggs are much fewer and considerably larger than those of *Arenicola*.

The whole course of development is essentially alike in the two forms. No polar globules of constant relation to the yolk were observed. The first cleavage divides the egg into two unequal spherules. The second, passing at right angles to the first, divides the smaller spherule into two equal parts, and the larger into two unequal parts. The third cleavage separates from these four blastomeres four much smaller ones at one pole of the egg. The latter (micromeres) soon become so displaced as to alternate with the former (macromeres). The micromeres now divide more rapidly than the macromeres, which they come ultimately to include by growing down over them. The ectoderm is formed by the derivatives of the micromeres, and in part, I believe, of the macromeres. The remaining portions of the macromeres form the entoderm. Two large spherules, which originally formed a part of the largest of the four primary blastomeres, are visible up to a late stage at the posterior extremity of the embryo. They are at first at the surface, but ultimately are grown over by the ectoderm and disappear. It is possible that they are concerned in the formation of the mesoderm and are to be regarded as primary mesoblasts. The mouth arises on the ventral side nearly opposite that pole of the egg where the first four micromeres were formed. The anus arises at the posterior end of the embryo. The egg-membrane is directly converted into the cuticle of the larva. The egg exhibits, during segmentation, alternate periods of activity and quiescence.

The embryo acquires two dorsal eye-specks, præoral and præ-